



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
02.03.2005 Bulletin 2005/09

(51) Int Cl.7: **G05B 19/042, H01L 29/00**

(43) Date of publication A2:
31.10.2001 Bulletin 2001/44

(21) Application number: **01104512.7**

(22) Date of filing: **02.03.2001**

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE TR
Designated Extension States:
AL LT LV MK RO SI

(30) Priority: **28.04.2000 US 561440**

(71) Applicant: **Applied Materials, Inc.**
Santa Clara, California 95054 (US)

(72) Inventors:

- **Cordova, Sherry**
Sunnyvale, California 94086-8504 (US)
- **Wilmer, Michael E.**
Portola Valley, California 94028 (US)
- **Nishimura, Yukari**
Sunnyvale, California 94086 (US)
- **Kroupnova, Natalia**
Sunnyvale, California 94087 (US)

- **Nolet, Clarice M.**
Los Altos, California 94022 (US)
- **Doyle, Terry**
Portola Valley, California 94028 (US)
- **Lyon, Richard C.**
Pleasanton, California 94588 (US)
- **Lobovski, Evgueni**
San Jose, California 95131 (US)
- **Louneva, Inna**
Palo Alto, California 94303 (US)
- **Toh, Woon Young**
San Jose, California 95117 (US)
- **Reiss, Terry**
San Jose, California 95123 (US)

(74) Representative: **Käck, Jürgen, Dipl.-Ing.**
Kahler Käck Mollekopf
Patentanwälte
Vorderer Anger 239
86899 Landsberg (DE)

(54) **Wafer fabrication data acquisition and management systems**

(57) The present invention provides a semiconductor processing device (800) including a tool (802) having one or more sensors, a primary data communication port (804) and a secondary data communication port (806). A sensor data acquisition subsystem (808) acquires sensor data from the tool via the secondary port (806). The data acquisition subsystem (808) acquires MES operation messages via the primary port (804). Sensor data are communicated to a sensor processing unit (828) of a sensor data processing subsystem (810). The sensor processing unit (828) processes and analyzes the sensor data. Additionally, the processing unit (828) can be adapted for making product or processing related decisions, for example activating an alarm if the process is not operating within control limits. In another embodiment, the present invention provides a method and apparatus for processing data from a wafer fab facility (1000) including a plurality of tools (1004-1010) each having a primary data communication port (1012-1018) and a secondary data communication port (1042-1048).

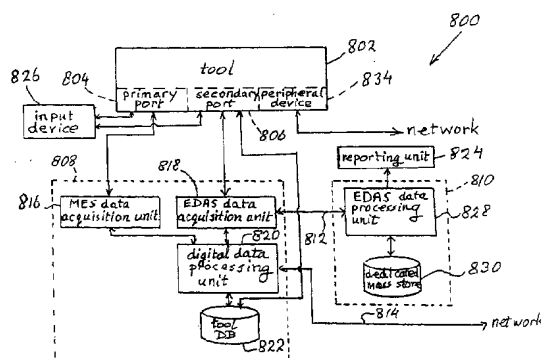


Fig. 8



European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 01 10 4512

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
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X	* column 1, line 65 - column 2, line 30 * * column 5, line 2 - column 9, line 34; figures 1,1a,3-3c *	18,28,29	TECHNICAL FIELDS SEARCHED (Int.Cl.7) G05B H01L

The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		11 October 2004	Salvador, D
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			

EPC FORM 1503 03.92 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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